

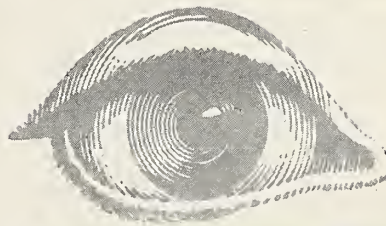
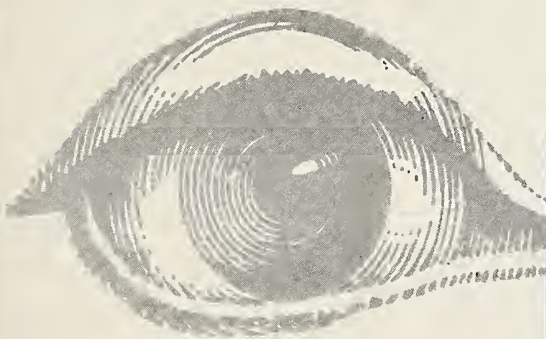
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EXTENSION SERVICE
Review

FEBRUARY 1957





Official monthly publication of
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and Universities cooperating.

The *Extension Service Review* is for Extension educators—in County, State and Federal Extension agencies—who work directly or indirectly to help people learn how to use the newest findings in agriculture and home economics research to bring about a more abundant life for themselves and their community.

The Review offers the Extension worker, in his role of educational leader, professional guideposts, new routes, and tools for speedier, more successful endeavor. Through this exchange of methods, tried and found successful by Extension agents, the Review serves as a source of ideas and useful information on how to reach people and thus help them utilize more fully their own resources, to farm more efficiently, and to make the home and community a better place to live.

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EAR TO THE GROUND

This issue of the Extension Service Review is devoted completely to the subject of Visual Aids. It was planned and written to give you a little help with this complicated business of communications. The articles have been written by experts in the fields of photography, exhibits, and other visual methods, who are well acquainted with the problems of county extension workers. It is the authors' sincere wish that the ideas they are passing along to you shall make your efforts more pleasant, interesting, and effective. Credit also goes to a Federal Extension Service committee who helped to plan this special issue of the Review.

For an appetizer, let me offer you a few choice bits from the articles that follow:

Leonard Rennie—"The test is not how many people crowded into the exhibit, but how many people received the message and acted upon it."

Elmer S. Phillips—"Choose the channels of communication that can make connections with the 'inner circles' to carry the recipients from the stage of awareness to final decisive action."

Duane Rosenkrans, Jr.—"A really

effective slide program requires a systematic plan."

Elmo J. White—"Color is one of the most powerful tools used by a designer in making the visual perform a specific function."

John Behrens—"Analyze your public presentation. Beware of the program so simple that it becomes monotonous. Unlock the rich treasure chest of your imagination."

Joe Tonkin—"Original thinking is more important to a good visual presentation than a fat pocketbook."

Duane Nelson—"Your exhibit should be a supplement to your program."

Don Schild—"Don't be so concerned with the mechanics of presentation that you overlook the principles you wish to communicate."

George F. Johnson—"Good storytelling pictures don't just happen."

And now for the main course. May it be palatable, digestible, and fruitful.

NEXT MONTH the Review will bring you more good articles on visual aids, two on marketing, and several on training. In April the emphasis will be on phases of developing leadership. CWB

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The way to a man's heart
May be through his stomach,
But the best route to his brain
Is through his eyes.

Open the way with VISUALS

by JOHN H. BEHRENS, Visual Aids Specialist, Illinois

THIS is a competitive age! If you as an extension worker are to enjoy success in reaching people, you must be able to meet the competition. The competition of television and athletic programs or the disinclination of people to learn and change their ways are hurdles each of us faces every day.

Now, turn your back on other problems for a few moments and analyze your public presentations. Let's have an honest-to-goodness think session in

do it with variety. Unlock the rich treasure chest of your imagination. Here there are no limitations.

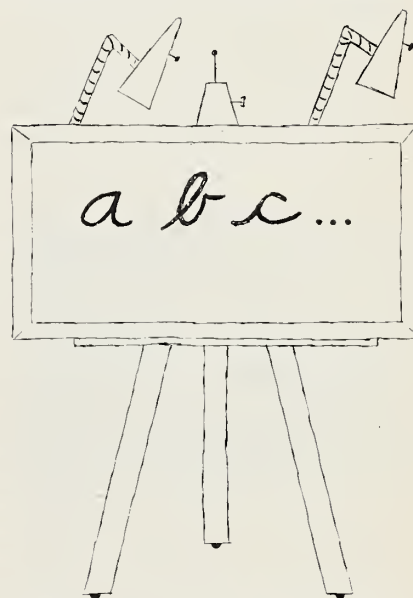
Take a quick inventory of your public appearances. How many of your meetings, for example, have followed the same pattern? Is this the order: Introduction, talk with a slide set or charts, question period, and then a worthwhile visit on the way to the door, or perhaps a cup of coffee with some earnest seeker. Would your audience appreciate a change in format for their meeting?

For ideas, look at what others are doing. Enjoy television, look at a fair exhibit by a commercial company, study a magazine layout, and subconsciously think what was good that you might adapt to your own use.

We know that visuals are effective. For one thing, to use them, you as a communicator are required to do more definite and concrete planning of your message. As a result, you are better able to control the impact of your message on your audience by presenting it in logical steps and pacing it with variety. You create suspense and maintain interest this way. People are inherently curious and will be subconsciously looking forward to what's coming if you build your talk step by step, and include something new or different.

Now, let's examine our communications visuals with new eyes. Start with the chalkboard. Is the surface in proper shape? Will chalk show? Take a look at your chalk size. I hope you have the big sticks so when you or the specialist write, a nice fat line will appear that is visible in the rear of the room. Is your chalkboard sturdy, not in danger of falling over, and is it well lighted? A couple of

inexpensive gooseneck lamps will do wonders to improve legibility of your printed word, and could do double duty later on in a window exhibit.



Then, do you have any large newsprint pads or newsprint sheets from your newspaper shop to make quick charts with felt-tip pens or crayon? Use these same sheets or sheets of wrapping paper tacked to the chalkboard with your main points of presentation lettered on in advance and turned over behind the board waiting for the right time to show them.

Do you have a flannelgraph? Is it in good repair? Clean? A soft neutral color that will not clash with colors you wish to use in your presentation? Wool flannel is probably more desirable, but more expensive. Cotton flannel, or suede cloth or any rough-napped material may be used.

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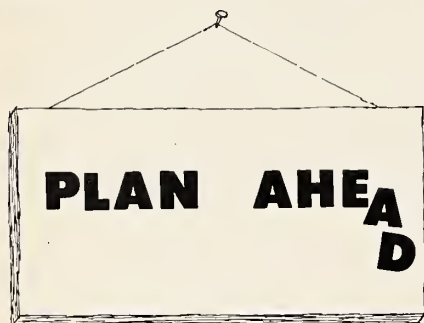
which we critically reexamine our process of visual communications.

In the first place, is our message easy to follow? Or, have we succumbed to the flowering quotation and complicated picture? Simplicity is part of good design. We admire the clean flowing lines of a sleek automobile. Remember this when you decide to make that next poster, plan your next fair catalog, or arrange a window display calling attention to National 4-H Club Week.

But beware of the program so simple that it becomes monotonous. You can

Stretch it over a sheet of fiberboard, protect with a frame, and you have a dual-purpose flannel and pinup board. Keep a supply of rubber cement, sandpaper, suede cloth, or flock coated paper with an adhesive back on hand.

Take a peek at your supply of charts. Are they preserved and stored properly for future or continued use? Is the printing on them large enough and bold enough to read from the back of the meeting rooms? Don't be afraid to cover up parts of your charts with plain paper tacked down with dabs of masking tape, ready to be stripped off when your point is made. Hence, a strip-tease chart. Cellophane or acetate makes an ideal overlay material to write on with a grease pencil, either impromptu or beforehand. Make your own charts with simple, big, and bold letters drawn freehand between lightly penciled guidelines. Don't forget to **PLAN AHEAD** or you might run out of space.

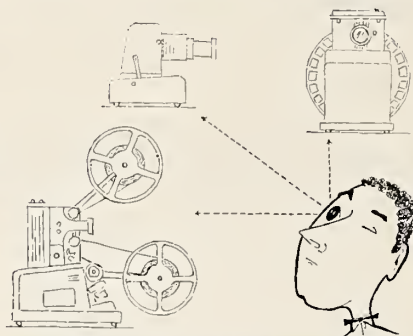


Keep your graphs simple and with a very minimum of material. Use only one factor on a graph at a time. If you need to show several factors, use several graphs. In place of a bar chart, use dowel rods inserted in blocks as you present facts. In that way, your audience only perceives what your present thought is, and is not racing ahead. Ask your State visual aids specialist for more help along these lines, or buy a good visual aids reference for more help. Study publications, books, and watch really good lecturers and speakers.

Posters, or parts of commercial posters, can add color and life to your presentation. A new poster in a good location can effectively carry your message. But please—take it down after a short interval. Although it may nicely cover a hole in the

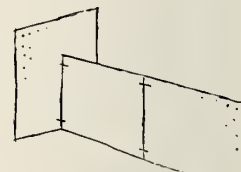
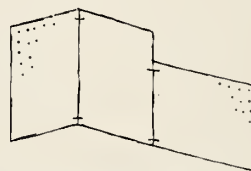
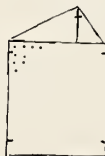
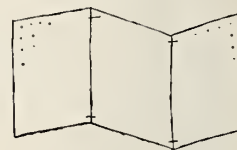
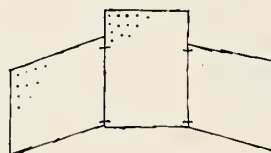
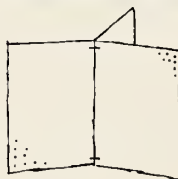
plaster, continued repetition will lead to monotony, boredom, and finally disrespect.

Cast a really critical eye on your projection equipment. Are the optical



systems clean? Are the screens in good repair? Are the mechanisms tight and oiled? These things are fine, but . . . more good lessons have been ruined by improper use of slides. Keep your slides series down to a minimum of 20 slides. If you need more, break your pace with charts or the blackboard or the flannelgraph. Twenty slides are fine, 30 are worse, and with 40 you should have stayed home.

Motion pictures??? Handle these with care, and unless used expertly your communications channel may be blocked with unwanted effects. Preview your films, lead up to your film with adequate teaching presentations using other methods, and then follow through with a discussion. Perhaps unfortunately, our first experiences with motion pictures were related with entertainment, and we tend to follow that pattern.



An overhead projector is a superior tool. If your budget will not permit one, perhaps your local school uses one that could be borrowed. These projectors are very versatile and can

be used in semidarkened conditions such as you would find in a room with venetian blinds. They have the further advantage that you never have to turn your back on your audience and you can continually expose a new writing surface.

You all know of the advantage of using models or the real object. The strong point of the 4-H tractor maintenance program is that the work is done on the real machine in cooperation with some willing dealer.

And now just a few words about the much-discussed subject of bulletins. Is your display neat, changed frequently, and accessible for study? A constant change of a few bulletins is better by far than exposing your whole hand at once. A small sign will direct someone to ask for one they don't see and might give you that opening wedge for communication you were not able to obtain before.

Do you have some simple type of exhibit set? Three pieces of pegboard 24 by 32 inches and painted a flat pastel color are excellent. In fact, 6 panels can be cut from one sheet of material 4 by 8 feet. Fasten them together in endless combinations with pipe cleaners. They are portable, inexpensive, and effective. Pick some key windows in your county and rotate a simple exhibit on a schedule. You might be opening a new channel of communication.

Specialists in the U. S. Department of Agriculture and your own State

extension leaders and specialists are ready to help you with visual aids. The challenge is yours. You are not limited by costs, resources, or equipment, only by your imagination.

A Portent in the Sky

by ELMER S. PHILLIPS,
Visual Aids Specialist, New York

A large portion of the world recently celebrated an event foretold to three wise men centuries ago by a star in the eastern sky, an event that gave rise to a different concept of religious faith. Earlier in 1956 astronomers the world over trained their telescopes on Mars, hoping to probe the mystery of a planet enough like earth to provoke thoughts of life in another part of the universe. Since man's beginnings, the heavens have provided keys to navigation over land or sea, unerringly guiding the traveler to his ultimate destination. Even today when we have so many mechanical instruments of navigation and computation, the heavens may hold a key to an epochal change in the place of visuals in tomorrow's communication picture.

The process of communication may be broken down into four or perhaps five elements, which are embodied in the diagram of Figure 1. There is the communicator (No. 1), a person with accumulated knowledge, part of which he wants to transmit to another person or persons. How effectively he communicates depends on his knowledge of the principles of learning (No. 2), and on his understanding of the different channels or media of communication (No. 3) and of the special qualities and usefulness of each. But he must also understand the people for whom his message is intended (No. 4).

The communicator often takes for granted the change he wants to bring about by his message; he is so familiar with his material that he can readily construct in his imagination all the desirable effects it can produce. But these effects may not follow inevitably from the mere presentation of facts. The desired effect

(No. 5) must therefore be considered in light of the communicator's objective: to increase knowledge or things known, to improve skills or things done, or to change attitudes or feelings.

In our extension work we have devoted much time to acquiring a thorough knowledge of our subject matter; this in itself is no mean task, as agriculture and homemaking continue to undergo rapid change. We have given a certain amount of our time to mastering the different channels of communication in order to find ways of reaching more people. As the extension worker's job becomes more and more demanding, he has naturally gravitated toward the use of mass media, in an attempt to reach more people with equal effort. But this has sometimes led to the erroneous assumption that if more people are offered our magic potion, more will necessarily accept and digest it, and more change will be produced in the community.

In the past, then, we have concentrated almost exclusively on the first and third factors of the communication process, instead of seeing the process as a whole. In the new era of communication, we shall spend more time studying the general principles of learning, understanding the person or persons in our audience, and devising methods to evaluate the changes that result from extension effort. In other words, we shall be less concerned with breaking down communication into its component elements and methods than with putting it together into a process by which the communicator relates himself to the recipient and his future thoughts and actions.

I should like to devote the rest of

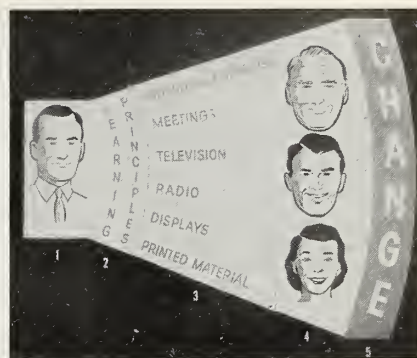


Figure 1

this article, therefore, to the individual recipient of our message. As a visuals man, I searched for a graphic symbol of the individual, to clarify my analysis of how and why a person's concepts and habits may be changed. I, too, turned my eyes toward the skies, and found among the planets one that may serve as such a symbol—the planet Saturn with its seven rings (Figure 2).

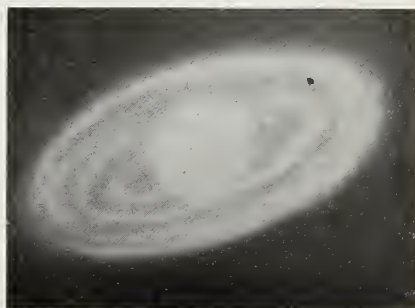


Figure 2

The outer ring may be likened to the senses, to which we must appeal before any meaning is associated with our message; the senses of sight,

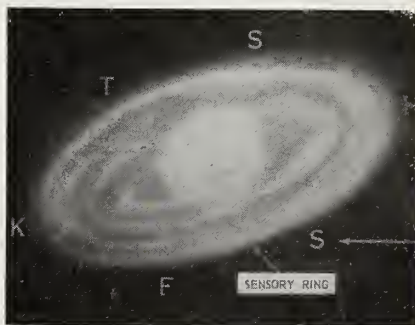


Figure 3

hearing, touch, smell, and taste, and the kinesthetic sense which guides muscular reactions. An arrow from

(Continued on next page)

space may represent a single stimulus such as the light rays reflected from a picture in a room (Figure 3). This stimulus will be received by the eye before any interpretation can be made by the recipient.

Few situations in life are as simple as this; but the illustration will serve to remind us that the visual specialist must take into account the physiological limitations of the sense organs. To put it bluntly, material intended to be seen must be visible, a truth violated every day. A simple experiment with cards bearing numerals of varying sizes—quarter-inch numerals, half-inch, three-quarter inch, one inch, increasing by quarter inches to a numeral two inches high—demonstrates the limits of size and distance at which the human eye can distinguish their shapes. Assuming one-half perfect vision, the quarter-inch size can be seen readily at 8 feet, and with increasing difficulty to about 16 feet. Correspondingly larger numerals are required as distances increase.

Color may point up still other physiological limitations. One of my acquaintances who planned to be an agronomist discovered to his consternation that because he was color blind he could not tell brown hay from green hay. He is now majoring in the field of animal husbandry. Additional examples from each of the senses would indicate that the communication specialist's effectiveness

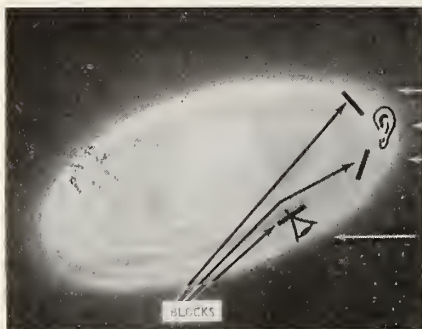


Figure 4

depends very much on his knowing the limitations imposed by the sense organs themselves.

The preceding illustrations have been purposely simplified; but the next step in analyzing how our senses function introduces the complex relation of this "sensory ring" to the "inner rings" of man's past experi-

ence, by which he identifies and evaluates the stimuli received by the senses. A personal experience may illustrate a remarkable ability which man possesses. When I was returning recently from Central America, our plane ran into severe air disturbances. About half the passengers were sick as the big plane bounced around like a paper in the breeze.

My sense organs received simultaneously dozens of signals. My ears heard the roar of the motor, the man in the next seat talking to me, the sounds of distress of nearby passengers, and the hurried footsteps of the hostesses ministering to them. My eyes were aware of the motion of the plane in relation to the clouds, of the steady drive of the propellers, of the movements of the hostesses and other passengers, and of the gestures and facial expressions of my seat-mate. I felt the sudden bumps and voids as we moved from one turbulence to another.

Yet throughout this complex and confused situation I was able to listen attentively to the man sitting next to me. I was almost oblivious to all the turmoil, and with a little effort carried on a perfectly normal conversation. I have tried to symbolize this experience in Figure 1.

Power of Selection

The second ring of Saturn is a graphic symbol of our ability to choose which stimuli we wish to receive, to focus our attention on them, and to block out others. Its implications for extension teaching are obvious. If we ignore this power of selection, the message we wish to convey may itself be blocked out, as stronger stimuli distract our audience. To reach the "inner man," our message must be stimulating enough so that our audience will block all other impressions except the one we wish to "get through." And so far as possible all the sense stimuli in the teaching situation must contribute to the message rather than distract from it.

The "second ring" of selection is not static, but may be compared to the whirling rings of Saturn; because of its constant activity an impulse may be accepted or rejected in a fraction of an instant. The constant activity of this "second ring" explains

also the phenomenon which Nichols calls "islands of listening." The graph in Figure 5 illustrates the pattern of attention for a person listening to a lecture. A chance association with a

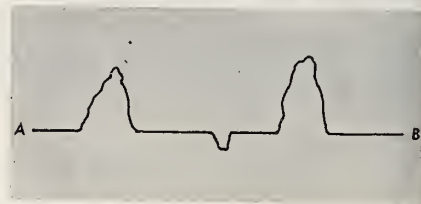


Figure 5

word, the stimulation of another sense organ, or some other factor causes the listener to deviate periodically from the thoughts of the lecturer. The straight horizontal line represents the periods of attentive listening; the mountains and valleys indicate the listener's deviation from the lecture.

Similar situations may occur with other sense receivers. Each of us has had the experience while we read of discovering to our amazement that although our eyes still move along the page, the words and sentences have suddenly become meaningless. We have to go back and read again. The second ring, which can be either a bridge or a block between sensations and meaning, has blocked off our understanding.

The remaining inner rings symbolize the individual's past experience, his habits, his likes and dislikes; they are storehouses of experiences, information, beliefs, and expectations. To distinguish the various rings as symbolizing different functions is unnecessary. For our purposes the important consideration is that elements in these "inner circles" of past experience, especially the most recent or most vivid impressions, will influence the meaning of the signal received by the outer ring, and may determine whether the "second ring" will accept or block the signal.

To reach the point of decision in any teaching situation, therefore, all elements of human behavior must be considered. Impressions received by the outer ring must connect with the appropriate elements within, so that the individual gets a clear concept of what the message means to him. This then may be converted to action by the individual.

(Continued on page 46)

Home Runs with COLOR SLIDES



by **DUANE B. ROSENKRANS, JR.**,
Extension Editor, Mississippi

A highly successful and experienced extension leader told us recently, "Folks will pay a lot more attention to a picture that shows someone they know. We all like to see pictures about our problems and our practices, taken in our county, or even better, in our own community." This is why we urge county extension workers to take good pictures, especially for color slides.

Uses of Slides

Here are some of the many uses Mississippi extension workers make of color slides:

Illustrating subject-matter talks— This varies from general scenes of crops, livestock, and home improvements to extreme closeups of insect pests. Often the slides help to explain a year-round program. The workers sometimes make their charts into 2 by 2-inch slide form, which helps them to make smoother and easier overall presentations.

Encouraging 4-H Club and home demonstration club work.—To interest boys and girls in 4-H Club participation, it is hard to beat slide series on such subjects as last summer's county 4-H camp or a trip that a winner received. The same applies to home demonstration club activities.

Advancing farm and home development programs.— This approach, which we call the balanced farm and home program in Mississippi, is difficult to explain to a general audience.

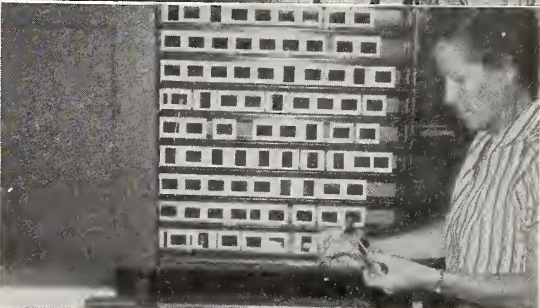
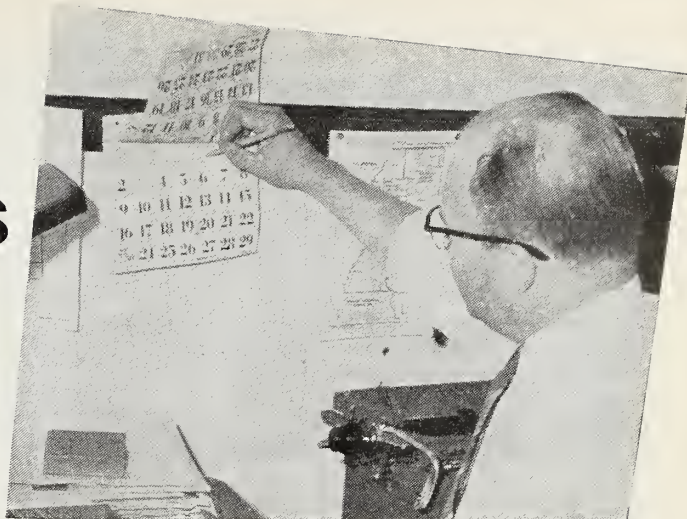
Above—The author marks on his office calendar a reminder of some seasonal slide making to be done several months ahead.

Backgrounds are very important. The sky is one of the best. Shoot from a low angle, having the camera close to the ground.

Standing on a high place, well above the subject, is often a big aid in getting a good agricultural picture.

Getting close enough to the subject is particularly important with slides. Many scenes will be relative close-ups with the subject filling the field of the slide. Become well acquainted with the view finder to avoid cutting out important material.

Slide files are important. For a large number, a system like this will pay for itself in time saved.



Yet it is important that large numbers of both farm and nonfarm people understand it. Slides offer one of the best ways of presenting this effectively. Our principal procedure is to report progress, usually showing the before and after of a given scene. Sometimes the after will show progress for each of five or more years.

Television—Most television stations prefer slides (properly exposed color is satisfactory) to large opaque pictures, since their equipment handles the former much more easily. The slides are almost always used to illustrate a timely practice as part of a farm program. From 6 to 12 slides are usually enough. The extension worker can be present to do the voicing, although it is usually a lot easier to furnish the RFD or staff announcer with script to accompany the slides. Many of our subject-matter slides are doing double duty on television.

Exhibits—Some workers have access to automatic slide projectors of the type intended for exhibit use. In some instances, sound can be synchronized with the showing.

Have A Plan

As with most extension work, a really effective slide program requires a systematic plan. This means making a written list of the scenes to adequately cover a given subject. Do this before taking any pictures.

The list often includes scenes to be made in different seasons of the year, or even in different years. For example, a series on year-round grazing might require that some scenes be shot during each of 6, 8, or more months. Some of our long-range plans for documenting farm and home development call for photographing the same scenes on a given farm at approximately the same time each year for a period of at least 5 years.

Not only is a list of scenes required, but this work needs to be a part of the worker's plan of work, with provision for his being reminded of what is to be done. To be sure that the work will be accomplished as planned, we like to list it for months ahead on our desk calendar or in our date book.

When script will be needed so that other people can present the slides

it is well to write at least the first draft in advance of doing the photography. This will help to assure that the scenes are set up to show what is intended and to have good continuity. After the slides are made, the script may be revised as needed.

Equipment Can Be Simple

As with most photography, the nature of the job to be done will determine the equipment needed.

For most subjects, where extreme closeups are not required, a relatively inexpensive 35-millimeter or size 828 camera will do. Many of our county workers like the 828 size because it has only 8 exposures instead of the 20 which tend to tie up both processing and the use of the camera for occasional black-and-white as well as color. Where much black-and-white is also to be done, we suggest two cameras.

For indoor scenes, most of our workers make slides by using the daylight type color film and blue-coated flash bulbs. This permits them to switch easily from indoor to outdoor shots, and also helps when much daylight appears in an indoor scene, such as in a living room with an outdoor scene viewed through a large window.

An exposure meter is not a necessity, but is highly desirable. It will pay for itself in the long run in better pictures and film saved. It seems to us that possibilities in the use of the more highly sensitive films that have become available in recent months make the use of an exposure meter more desirable than in the past.

Another item of equipment, and one that costs little or nothing, is a reflector for concentrating sunlight in the area of the subject. This is particularly desirable for closeup work. The reflector can be a piece of cardboard with tinfoil glued to it, a piece of light-weight composition board painted white, or other simple arrangement.

Taking the Picture

Space does not permit an extensive discussion of photographic methods, and there is much reliable literature on the subject. However, the following highlights may be useful.

(1) Hold the camera very steady

when taking the picture. Many people who have difficulty holding the camera steady enough use a tripod. Others cure the trouble by attaching a cable release to the camera. Some use both.

(2) Avoid shadows on or near the subject in most color pictures. Shadow is the worst enemy of this kind of photograph for most farm and home subjects.

(3) Get close enough to the subject to fill up the field of the slide without cutting out anything that matters. Many subjects (such as a herd of cattle) generally look farther away to the camera than to the photographer's eye.

(4) Consider vertical as well as horizontal shots, except for television where all pictures must be horizontal. Also consider the possibilities of having the camera either close to the ground or on an elevation. Many of the best agricultural shots are made from a fairly high elevation.

(5) Backgrounds are very important. A poor background sometimes spoils a good subject. A good background (such as terraces, a herd of cattle, or a woodland) adds a lot to some agricultural scenes. On the other hand, the viewer should scarcely be aware of the background for some scenes, particularly the relative closeups. If in doubt for many outside subjects, use the sky as the background, shooting from near the ground. A general rule for inside subjects is to avoid dark walls, dark drapes, or dark furniture as background in most instances. Large floral designs in wall paper, drapes, or furniture are also distracting.

Filing Slides

This is one of the most time-consuming phases of color slide work. Yet a good filing system is necessary if the best use is to be made of the slides.

Some subject-matter information should be recorded about most slides. In the case of those on farm and home development, at least the date, name of the family and the main practice shown should be recorded. Some workers simply write this on the ready-mount of each original slide. Others number the slides and

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enter the information in a card file with corresponding numbers.

Slides that are to be used much should be mounted between glass. There are several ways to do this. Mounting is done, not only to protect the slide, but to make each slide move through the projector in good focus.

For workers who expect to acquire only a few hundred slides, several types of file boxes are available. Smaller boxes make it easy to mail individual sets of slides. For some subjects, the slides may be filed in the magazines for automatic slide projectors.

For large collections of slides, we prefer a large metal file with pullout frames that each hold 90 or more slides. These files may appear to be a little expensive, but with a large collection they will pay for themselves in time saved.

Showing Slides

Many makes of good projectors are on the market. We like a 750 or 1,000-watt one. All reliable makes appear to have good cooling fan systems. An automatic slide changer is very helpful.

Some workers have made the mistake of buying a medium to high-priced 35 millimeter camera, and then having funds remaining for only a low-wattage projector. When funds are limited, we urge the worker to buy a minimum-priced camera and a projector of adequate wattage.

When showing slides, or any other projected pictures, arrive early and set up the screen and projector. Get the projector in proper focus before the meeting starts.

If an automatic slide changer is not used, be sure that all slides are in the right order and can easily be fed into the projector so that all will be shown right side up. A good advance precaution is to mark a dot in the upper right-hand corner of each slide mount while holding the slide in an inverted position.

It is a good idea to always carry along an extra projector bulb and an extension cord.



SUPERMARKET

Visuals



by JOSEPH D. TONKIN, Federal Extension Service

THE cost of a visual aid is no indicator of its success as a teaching tool. Over and over again we have seen the evidence that original thinking is more important to a good visual presentation than a fat pocket-book.

We are constantly trying to keep our audience in a learning situation that is close to reality and still loaded with an element of surprise. To do this visually, keeping the cost factor well in mind, we try to use a familiar item in a different way to make a point. For example, a State specialist not long ago wanted to illustrate to a small audience the various areas of the earth's surface that were devoted to growing certain crops. Did he use a world map, or an expensive chart? No indeed. He used a cantaloup. And with a knife he sliced out one segment and indicated that that fraction of the earth's surface was devoted to raising rice. Then he sliced off another section and told his audience that that section was planted to wheat. Here was a common everyday melon used in an unusual way. It worked, both from the standpoint of interest and impact.

Visual aids can usually be divided into four categories, those that

- Explain
- Emphasize
- Compare
- Attract attention

Visuals that explain are usually referred to as the "direct teachers"—the blackboard, the flannelgraph, models, how-to-do slides, and motion pictures.

Visuals that emphasize include drop cards, some flannelgraphs, newsprint pads, or any device that repeats for the eye something we have said. If you mention chlordane, the insecticide, and then point to the word on a card, you are using the visual to emphasize or give double impact to your message.

Visuals that compare and attract attention are best suited to the use of materials, like the cantaloup, that you can find in your own grocery store, the local "five and ten," or even the back yard or home garden. A loaf of bread, cut into the proper sections as you talk, can illustrate the farmer's return of the wheat dollar better than many expensive drawings. One chunk of bread represents the cost of the seed; another chunk may go to pay for fertilizer; another for milling; still another for baking and delivery. And there will be a small chunk left—the farmer's part. Here again is something used in a different way, a natural bar chart.

The same thing goes for a pie chart. What's wrong with using a real pie?

A citrus specialist in California once told his agricultural economics story with a box of oranges. He showed the group that so many oranges from the box paid for smudging; so many oranges paid for the picking; and so on. You can make a visual of comparison out of anything from a step-ladder to a bottle of milk.

An Oregon consumer specialist had five points she wanted to impress on her audience about the buying of

(Continued on page 46)

Teaching by Television



by MRS. SHIRLEY MARSH, Assistant Extension Editor, Nebraska

NEVER before have extension agents been blessed with a more valuable tool to reach large numbers of people than they are now with television. Nebraska extension workers have found this medium to be one of the most effective visual teaching tools available to them.

In no other way can an audience see and hear an extension agent so well, get a close look at his illustrative materials, and, at the same time, sit relaxed in a comfortable chair at home. Never before has learning been made so easy.

The television screen is a continuous picture before the viewer, a constant visual with action, sound, sight, immediacy, intimacy, impact, and personality. The skillful combination of these qualities makes for utmost effectiveness in delivering a message.

In planning television shows, agents learn to think in terms of these qualities and are able to visualize the picture they are putting before their audience. Extension agents need imagination, ingenuity, and energy for the job, because television calls for every visual device we know.

The action closeup makes television the most intimate and straightforward medium agents have to work with. The method demonstration, in which agents have long used actual objects, conveys reality to its fullest. The television camera, through its power to enlarge an object, gives this closeup view even more impact.

Nebraska agents are encouraged to plan their television shows to take full advantage of the closeup. A simple rule of thumb has been to plan

for about half the program time to be spent on closeups of the materials being presented. They endeavor to keep their demonstration materials simple and their actions deliberate when using them. Action, of course, is one of the important qualities of television, but movements also need to be meaningful.

The agent on television uses techniques similar to those of the salesperson. One particular item is selected to sell to the customer. Points are presented firmly and confidently. When the item is displayed, it is shown to the viewers long enough for them to see the points mentioned. Movements are deliberate, and all items that will divert the attention of the viewer are eliminated. Thus, the sale of information is more readily made.

Although television is a visual medium, the audio cannot be neglected with sloppy verbal presentations. Thoughts should be organized and mentally connected with the picture the viewer sees on his television screen. Outline notes are excellent helps, but a completely scripted program is unforgivable. Notes can be hidden in the bottom of the demonstration tray, away from the eye of the viewer, pinned or glued to the back of an object being discussed, or written on the back of a poster or chart. These hidden helps give self-confidence and will be at hand to deliver an agent from a verbal dilemma.

Looking at television as a visual in itself, consideration should be given the visual aid devices used in programming. The best visual device is

the "real," the "actual." This can be people, animals, plants, places, or objects. If it's impossible to use the real thing, then agents must seek a substitute — models, miniatures, photos, slides, or sketches.

There are times when opinions vary about the importance of the real thing. A Nebraska agronomist informed his program director that he was bringing 1,200 pounds of fertilizer into the studio for his show. The director's skepticism faded when 1,200 pounds of commercial fertilizer were delivered to the studio. In this case, the agronomist felt the viewer would be impressed by seeing the actual size and amounts of the fertilizer needed to maintain soil fertility in the production of 100 bushels of corn. He impressed the viewer with this, the actual amount of soil nutrients that would be removed from the soil in the production of the crop, if the fertilizer were not applied. The 1,200 pounds gave his show much more impact than models or miniatures could have done.

A home extension agent recently presented a television show about the problems caused by hard water in her section of the State. She made her points by using three jars of water. One contained hard water; one had a precipitating conditioner added to the water; and the third was resin conditioned. She added soaps and syndets to each type of water. The amount of suds told the story. The subject was important to the audience, the props were very simple, and the points clearly made.

There are times when it is not only

difficult but impossible to bring the "real" thing into the studio. Slides, movies, and photographs of these things are the easiest substitute to use. The program still maintains a large percentage of its effectiveness. Some programs can be built entirely around these visual devices. When this is done, the monotony should be broken by coming back to the narrator, between every three or four slides or photographs. This can be achieved by segmenting the information being presented. Opening and closing remarks as well as the transition would be live for the viewer.



Nebraska's horticulturist, Wayne Whitney, uses nothing but the real thing in his weekly show, *The Flower Box*, on the University's educational television station.

Tips on Visuals

In some cases there may be as much as 50 percent loss of picture on slides or photographs by the time it reaches the home set. The border areas of the slide or photograph may or may not be received, so it is important that the subject of interest be centered. When selecting the slides or photos, mentally divide the picture into fourths and, with your eye, crop off the outside one-fourth. The middle area can be considered safe for television transmission.

All visual devices used in television should be simple and effective. Extension agents have little time to work out elaborate ones. To effect simplicity, a sound knowledge of the principles of design is helpful—brevity, balance, clarity, movement, and continuity. The elements of design should also be kept in mind—space, line, texture, color, and values. Most women staff members have run across this basic knowledge of design in other phases of their work. The men have little trouble in learning how

these design principles apply to television.

Illustrations for flannelgraph or magnetic board use can often be found in magazines or catalogs. The lines should be simple and uncluttered and contrasting in color. Specific parts of the illustrations can be emphasized by lining them with black crayon or ink.

Lettering problems can be solved by tracing letters from boldfaced headlines in newspapers and filling them in with ink. Simple lettering rulers are readily available. Lettering for television art should have contrast. There should be at least three gradations difference in the television gray scale (a 7-step scale ranging from black to white) between the letters and their background. Lettering should have a ratio of roughly 1 to 15 in relation to the total height of a chart. The width of all lines should be no less than one-eighth inch. This ratio does not include the allowed border area of the chart. Black, gray, or white lettering on gray televisions well. They are even more effective if shadowed with black or white.



Home agents, left to right: Charlan Graff, Margaret Crosby, and Esther Chamberlain learn and discuss the importance of gray scale and color, in relation to the visual devices they plan to use in their TV shows.

Remember YOU

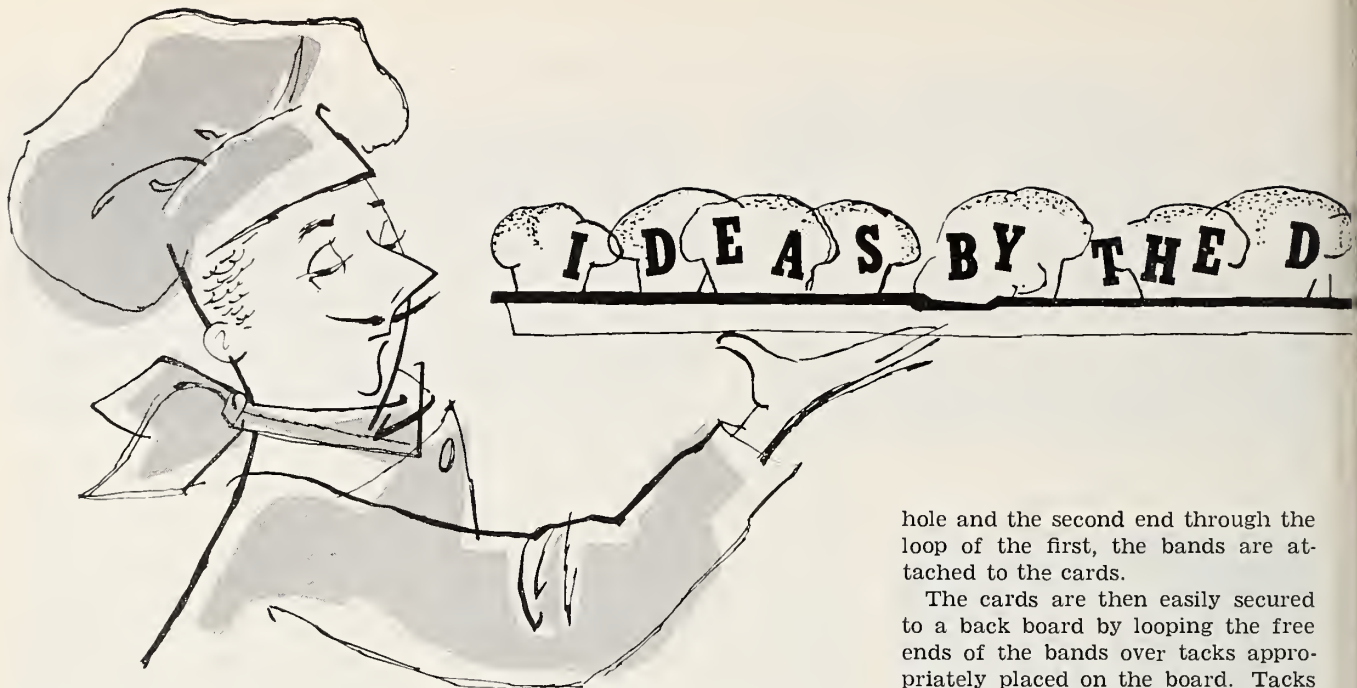
Don't forget YOU when planning visual devices for television. Extension agents need to think of their own appearance. Clothing and good grooming are extremely important. Simply cut or tailored clothing for

both men and women seem to be most attractive. Avoid sharp contrasts. Soft grayed colors televise well. Color of the garments selected depends largely upon the background of the studio set in which the show is staged. If the background is dark, a garment which appears in the lower half of the gray scale should be worn. If the background is light, the converse. Jewelry which is bold in size and color, with broken areas, not dangling or glittering, adds a note of interest to the woman performer's appearance.

When YOU are the visual device, personality and a pleasing manner will be an asset. A smile is priceless. Be serious when the subject demands, but never sullen while being serious. Be informal with the viewers and make them feel at home. Above all, be honest with the viewer. Accidents happen and mistakes are made. These can easily be shared with the viewer. The feeling of warmth between YOU and the camera is important. Until an agent really feels that the camera is a good friend, a show will lack that person-to-person quality.

Every television show needs a good beginning. This can be done by giving each program a theme title and by arousing interest through the use of a leading visual object or "gimmick." The theme gives direction to the program and prevents wandering. It sets up a definite progression of action and information. The closing is important, too. Some agents just fade away. The ending should be planned and timed. It should be visual and not just gab. This is not easy. A summary, showing the finished product, a challenge, a startling statistic, or a statement of what the changed practice can do for the viewer are often used. Above all, the endings should be interesting, pleasant, and attractive.

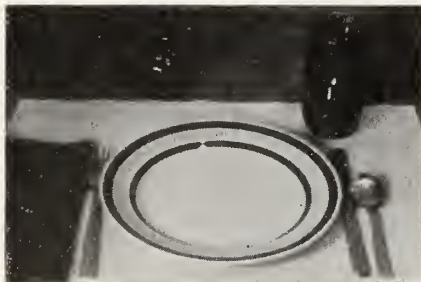
Let there be no illusions. Television requires about as much time as an agent would spend in preparing a good subject-matter demonstration for a meeting. But because he has had the experience, preparation of a television program comes naturally for extension people. Agents in Nebraska who use it to support their overall extension program agree that television is important as a teaching medium.



Using Slides to Supplement a Demonstration

Slides are a very good visual aid when carefully planned to supplement a certain subject.

For example, in November, 1955, I gave a lesson on table settings. Following a meeting with Mrs. Myra Zabel, home furnishing specialist, we planned table settings, using table linen, china, glassware, and silverware.



The result was a set of 32 slides. These were used at leader meetings to supplement the discussion and the leader's ability to use other combinations at the meeting. Following the series of leader meetings, the set was divided and lent to leaders. They reported that the slides were a big help because often they did not have a good assortment of actual dishes.

We have prepared and used slides on braided rugs, flower arrangements,

chip carving, and 4-H booths. At present I am preparing a set on upholstering furniture. Photographs will be taken during the upholstery workshops.—Ada Todnem, Pipestone County Home Agent, Minnesota.

"Snappy" Visuals

The obvious educational advantage of keeping visuals out of sight until they are required for presentation is basic to many a common visual aid device, such as flannelboards, magnetic boards, and flip charts.

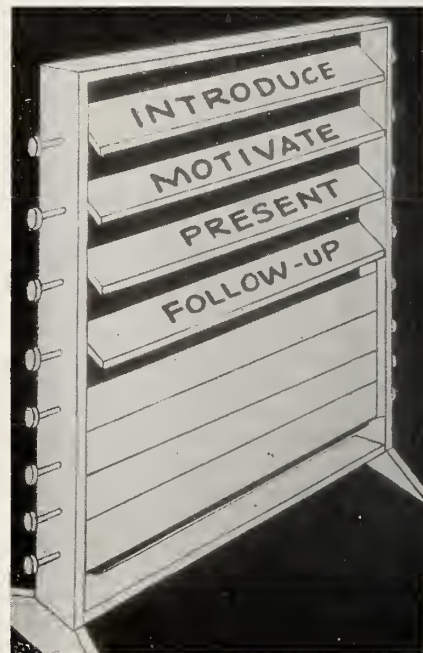
The U. S. Army has made good use of a gadget known as the venetian blind, named because, being made from a series of slats, it does resemble a blind, the slats are turned face forward one at a time revealing, line by line, the desired instructional material. Such a device is especially useful for presenting itemized information or simple outlines of topic development.

A handy variation of this technique, which does not require an army truck for transportation nor a carpenter shop for construction, can be achieved by the simple application of a paper punch and a few rubber bands.

The punch is used to make a hole at the ends of the narrow cards on which the lines of instructional material are lettered. By passing one end of a rubber band through a punched

hole and the second end through the loop of the first, the bands are attached to the cards.

The cards are then easily secured to a back board by looping the free ends of the bands over tacks appropriately placed on the board. Tacks should be so spaced that the bands will stretch taut holding the card firmly without sagging. Thus prepared, the cards may be easily and quickly turned as desired during your presentation.



Golf tees used with a pegboard work even better than the tacks. Of course, if one has pegboard and golf tees handy it is possible to dispense with the rubber bands since the cards may be simply placed on the pre-arranged tees as on so many shelves.



But the bands do add interest by the magic of their snap, and cards thus secured are in no danger of falling.

If you should prefer the pegboard and golf tees, you'll still have use for that paper punch. It's great for bulletin displays. With a single hole in the upper left corner of each bulletin, it's easier to fasten than the board with the tees. Note how handily you can line them up, each hanging at the same jaunty angle.—George C. Randall, Visual Aids Specialist, California.

At the Spring Flower Show

Each year since 1943, the Massachusetts Extension Service has been invited to stage an educational exhibit at the Spring Flower Show of

the Massachusetts Horticultural Society which is held in Boston during March. Attendance has averaged 100,000 per year.

The Extension Service believes this to be an excellent opportunity to meet and assist, among others, the urban citizens of the area with their many horticultural problems. Each year the exhibit has featured some one phase of horticulture, with two attendants on duty to explain and answer questions during the 7-day showing.

For the past 4 years, the same basic background has been used, varying it to represent an interior or exterior area, depending on the subject being featured. One year it was house plants; other years it was, for example, broadleaf evergreens, garden roses, and trees for shade.

Silent Teachers

Despite busy workday hours, housewives and mothers employed by a local foods processing plant have found new ways to quickly prepare nutritious meals for their families.

University home advisers of Alameda County solved the problem of getting their information to these very busy people by displaying a series of portable bulletin boards in the lunch area provided for the women cannery workers. Each dis-

play of the series presents for 1 week a single aspect of practical meal preparation, such as quick breads and menus for easy, well-balanced meals.

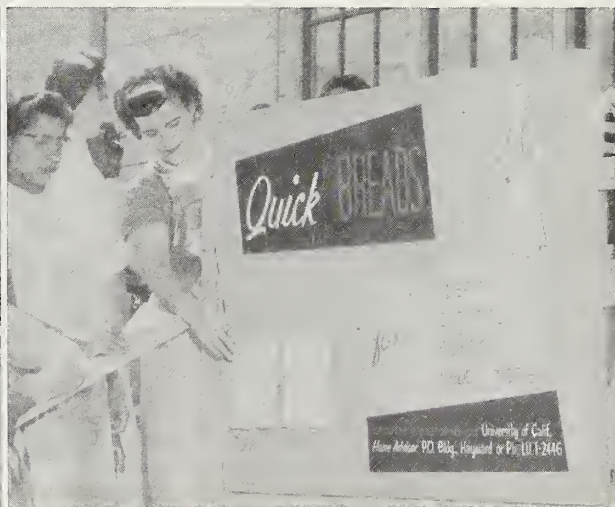
Informative handout materials were offered in racks attached to each display and labeled "Take one." Observers noted that not only were the displays read and studied by these appreciative ladies but that they were actually the center of interest and topic of conversation for the lunch groups. The "take-one" pamphlets of recipes were taken and kept.

Thus, with simple and attractive bulletin displays, the Alameda home advisers served their communities and made hundreds of new friends. By anticipating the need, they got the right information to the right place at a time when it could be most helpful.

The unqualified success of this experimental venture was such that it will be repeated next fall in a program covering several counties and numerous food processing plants. The display panels used will be self-contained, folding pegboard panels which will remain on location throughout the season. The illustrative materials may thus be circulated by themselves from one location to another, minimizing production requirements and shipping expense.—George C. Randall, Visual Aids Specialist, California.



Extension's educational exhibit at the Spring Flower Show in Boston, Mass. Attendance has averaged 100,000 persons, many with questions to ask.



For busy employees in Alameda County, Calif., information on meal preparation is taken to them via portable bulletin boards.



Using Color in Visuals

by *ELMO J. WHITE, U. S. Department of Agriculture*

WITH the increased emphasis on the use of visuals for disseminating information, color is one of the most powerful tools used by the designer in making the visual perform a specific function.

Color is not limited to any one visual medium but may be employed widely across the board. In the hands of a capable designer it can be invaluable in telling the story. However, used unwisely it can defeat the purpose of the visual; therefore it would be wise to consider certain basic guides in the use of color.

We use color in visual presentation for any one or all of the following reasons: (1) To create impact, (2) to portray realism, (3) to maintain interest, and (4) to compete for attention.

In considering the use of color for any of the above functions, it is necessary to understand certain basic psychological reactions to color. Color may be broken down into two broad categories—colors that create an illusion of movement or vibration and colors which recede or give depth.

All combinations of colors originate from basic primary colors of yellow, red, green, and blue. Used individually any one of these colors might not necessarily be pleasing to the eye. For example, primary yellow is not the warm shade of yellow that we normally associate with the term. It is more on the cold lemon colored side and often is disturbing to the eye. In like manner, primary red is not a red in the sense that we normally associate with rich warm red but is on the cool magenta side.

Primary blue and green are not the warm rich deep shades that we normally associate with blues and greens but are very much on the cold

side; but any combination of these colors will produce any color in the spectrum. Frequently a designer will defeat the impact of an otherwise powerful visual presentation by using these basic primary colors in their full value. The trend in the employment of color in visuals is to use the secondary combinations of these colors.

It is well to consider that colors are significant in that they create moods. As an example, through history from man's earliest beginning yellow has been associated with the sun denoting warmth, life, and understanding. Red has also been a symbol of action, conquest, and danger. Blues have always been indicative of tranquillity, space, and mystery. Greens are associated with plant life, nature, and growth. The designer will do well in analyzing the theme of his visual presentation in adapting colors which by their mood association complement the theme of the visual.

Certain combinations of colors are disturbing to the eye in that used unwisely they create a sense of false motion or vibration. For example, to the eye certain shades of red on a blue background create a vibration and thus decrease readability. In like manner, certain shades of yellow on a green background have the same reaction. The designer should guard against such combinations. In modern visual presentation this is particularly true in the use of color for lettering and message transmittal. Certain colors tend to recede into the background. The designer can capitalize on these colors to create an illusion of depth in the design. The browns, ochers, deep warm greens which we commonly refer to as the earth colors used wisely can be a powerful tool

in the hands of the designer in improving the impact of a visual giving depth and accentuating points of interest.

We have discussed some of the basic psychology of color, its reactions to the human eye, and impact on attention. By the mere fact that we are surrounded with color in our everyday existence, we use color in visuals to portray realism. This is particularly true where we want to clarify specific detail. In agriculture the use of color for realism is invaluable in depicting plant growth.

Realism may be portrayed by any one of several media—by the use of color photography of the subject portrayed, or by carefully rendered art work. The determination as to which media is the most practical can only be gaged by the specific function of the visual and the budget allotment for such a visual.

For multiple reproduction color photography would probably be the least costly. For a single presentation having limited use as to time, employment of the actual subject would be effective. This again would be influenced by the nature of the subject and the size. Detailed color renderings prepared by the skilled artist may also be used for multiple presentations, but again the cost element for reproduction should be considered.

With the development of new presentation materials and equipment and by the use of individual ingenuity, the designer has unlimited resources at his command for the employment of colors in visuals. By further application of the principles of color, the designer can prepare the visuals which may have maximum impact and information value.



How to "Draw"

A FULL HOUSE

by DONALD T. SCHILD, Federal Extension Service

A full house at your meetings involves more than chance—it involves the elements that make up an effective presentation.

Your public has become very presentation minded. They have become selective in their television viewing on the basis of how well the show is visualized and are using the same yardstick in evaluating your meetings. It is true that you have a captive audience at your meetings—they can't turn you off or change to another channel—but they can fail to understand, fail to listen, and fail to stay, or come back!

Visuals make use of sight, and about 82 percent of our impressions are gained through sight, or the eye. We know that words alone result in 62 percent retention at the time a lecture is given and only 20 percent at the end of 3 weeks. You can double the retention by showing your audience the printed word in addition to speaking, but the use of actual objects will increase the retention six times! So, *how* we visualize is important! Many people make the mistake of mechanizing their presentations. They are so concerned with the techniques of visualizing that they overlook the principles they wish to communicate. Consequently, their audience remembers the visuals but fails to get the message. Remember, the term is visual aids—they are an

aid to learning and are not meant to stand alone.

An effective presentation demands three steps in preparation:

1. *Determine objective*—what you want your audience to do after the presentation is over.
2. *Outline subject matter*—list only the basic points necessary to accomplish objective.
3. *Visualize each point*—to get the maximum understanding and retention.

Actual Objects

I have yet to see an artist who can draw an ear of corn that looks more realistic than an actual ear of corn—so why go to the time and expense of using artwork when the real thing can be used? Real objects affect all five of the senses (looking, listening, handling, tasting, and smelling). They are also familiar to the audience and therefore don't detract as gadgets often do. They enable you to get action into your presentation and can usually be obtained on short notice. The common crutch for failure to visualize is "I can't draw," "I haven't any money," and "I don't have time." If you will try to illustrate your points with bottles of milk, loaves of bread, or piles of corn, I think you will no longer need to rely on those crutches!

Models

If it is impossible or impractical to use the real object, then consider a model. You are still dealing with three dimensions and will appeal to all five senses as in the case of real objects.

Life-size models can be used when you have difficulty in keeping actual materials. For instance, a piece of steak, representing the amount of protein it contains, would rapidly spoil but a life-size wax or plastic model can be used over and over.

Miniature models are often practical when you are talking about landscaping, building arrangements, and livestock. In those instances, it would be impossible to use the real thing. Don't overlook toys in your local dime store as a source of such models.

Enlarged models are necessary when the real thing is too small for the audience to see details. Enlarged insects, cutaways of machines, and such, are examples.

Animated models, or gadgets, can be helpful if used properly. Use them only to emphasize a point. A good rule to follow with any visual is to never let it interfere with your message. If the audience becomes conscious of your gadgets as such, then your message is lost.

(Continued on next page)

Active Graphics

The active graphic ranks high as an effective visual because it builds your story step by step in front of the audience. It gives the impression that you are doing it specifically for them and has the psychological advantage of leading them by the hand through your message.

The common *chalkboard* is still one of the most effective of the active graphics. We have found that a green board and yellow chalk give the best visibility. That combination also avoids the danger of flare that occurs when a black board and white chalk are used on TV. A homemade chalkboard can be made by painting any smooth surface, such as metal, hardboard, or plywood, with several coats of chalkboard slating available at most paint stores.

Flannelboards have been widely used because they enable those who do not have the ability to draw or write well to use readymade materials. It works on the principle of having a background of flannel or similar napped material which serves as a base for the cutouts. The cutouts can be backed with a variety of materials to make them stick to the flannel. Sandpaper, felt, flannel, commercial flockings and suede papers are possibilities. Don't restrict yourself to paper cutouts on the flannelboard — styrofoam, sponge rubber, napped rubber sheeting, foam plastic, darning yarn, shoe insoles, and even your desk blotter will work.

Magnetboards are rapidly replacing flannelboards because of more positive adhesion of the cutouts, plus the fact that materials can be overlayed to build up your story. The magnetboard must be of ferrous material—light weight alloys like aluminum and magnesium will not work. About a 28-gage sheet metal seems to work satisfactorily. Back the materials to be placed on the magnetboard with small magnets so they will hold when they come in contact with the metal.

A *combination chalkboard-flannelboard-magnetboard* can be made by using a piece of sheet metal that is 36 by 48 inches. Paint one side with two coats of chalkboard slating and cover the reverse side with flannel. Lap the flannel over the edges of the metal and hold in place by framing



Figure 1. A movable pie chart constructed of circles of cardboard, each cut to the center so they can be interlocked as illustrated.

the metal with do-it-yourself aluminum storm window sash.

The *ferriergraph*, patterned after the pop-up comic valentine, enables you to make things pop into view and give the impression of animation. This is done by pulling a tab sandwiched between two layers of cardboard and causing bars on a bar graph, trend lines on a line graph, or various messages to pop into view.

Acetate overlays permit you to supplement original messages by the addition of acetate sheets, one at a time, to add trend lines, changes in outlines, wording, and so forth. Acetates can be purchased that will take common paints and inks, or special paints and inks can be purchased that will work on most acetates.

The *movable pie chart* and the *movable bar chart* are examples of visuals that can give you multiple use. The movable pie chart is made by cutting a series of circles about

18 inches in diameter from different colors of art board. Cut each circle to the center (the radius) and then by interlocking them you have a movable pie chart that can be used to visualize any subject where you are dealing with parts of a whole. If you calibrate the circles counter clockwise, you will be able to tell immediately when you have the desired percentages.

The movable bar chart can be made by taking a piece of tempered masonite and painting it with green chalkboard paint so you can write on it. Cut a series of slots near the top and bottom of the chart. Bands of elastic webbing can form the movable bars by running the elastic through the slots and fastening the ends together on the reverse side of the panel. Dip half of each elastic band in dye or sew two colors together to enable you to raise and lower each bar.

Newsprint pads are becoming quite

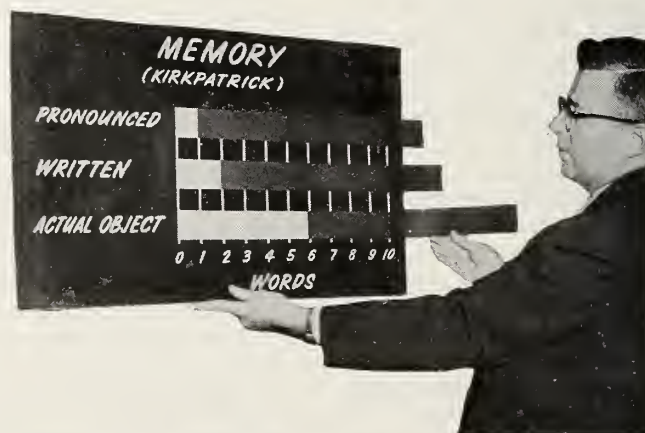


Figure 2. A ferriergraph which uses sliding tabs to produce animation, demonstrated by the author.

popular. They consist of newspaper stock and can be obtained at your local newspaper office. They have two advantages over the chalkboard: first, you don't erase a message to put up another but simply turn the page and use a fresh sheet; and second, you can prearrange material before the meeting. By supplementing artwork previously done or by tracing over light pencil outlines, you can give the impression of being able to do freehand drawing. You can use colored chalks, marking crayons, or felt nibbed pens on newsprint and the visibility will be better than even the green chalkboard and yellow chalk.

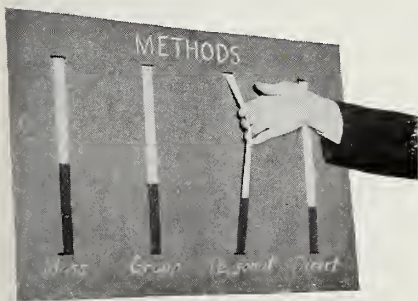


Figure 3. A movable bar chart consisting of elastic loops mounted on a background of tempered masonite.

Projection

Keep in mind that it is advisable to go to some form of projection when you have audiences of 100 or more people. It will be difficult for audiences of that size to see charts, posters, and models unless lighting, seating, color combinations, and other physical conditions are just right. And remember that a visual that cannot be seen is worse than no visual at all!

Usually, you have little control over the room in which you use projection but, insofar as possible, strive for the preferred arrangement—the first row of seats no closer than two and a half times the width of the screen being used, the last row no farther than six times the width, and no one beyond 30 degrees from the line of projection.

Movies provide us with a powerful visual tool because they show what

can't be duplicated locally. They condense time and space, slow up time, and incorporate sound and motion to arouse emotions and change attitudes. In the past, we have had to rely largely upon commercially sponsored movies because of the high costs of production. Consequently, they haven't been localized as much as we would like for good teaching. Now, however, many colleges have their own motion picture producing units and good low cost and to-the-point movies are becoming available. Don't use them just as time fillers. To be effective, a movie should be preceded with a buildup and followed with a discussion.

Slides are familiar tools to most of you. One of their big selling points is the fact that you can produce them locally and change the order to fit the situation. They can be used to show step-by-step processes, record events, build up standards by showing outstanding work, identify unfamiliar objects, and the like. Remember that a slide is no better than the use made of it. Be sure that it tells a story and project it so the audience is not conscious of the mechanics of projection. To accomplish this, you need to mount the slides in glass to prevent popping out of focus. Use a projector with *at least* 500 watts illumination and have a remote control or an experienced operator. Many presentations have been ruined because an inexperienced operator got the slides out of order or upside down!

Filmstrips differ from slides in that they have to be shown in a set sequence. This can be an advantage or a disadvantage, depending upon the occasion and subject matter.

Overhead projection probably has more potential than any other visual tool at the present time. It works on the principle of light going through a transparency and then being reflected to a screen in back of the operator. It enables the operator to face his audience and operate the machine. The light source is strong enough to make it possible to use the projector in a lighted room. The operator can build his story before the audience by means of acetate overlays, wax crayons, and colored inks. Costwise, it will run about the same as a good slide projector.

Opaque projection, on the other hand, works on the principle of reflecting light from an opaque surface such as a printed page or a picture. In contrast to the overhead projector, this machine demands a complete blackout of the room unless one of the newer models with an increased illumination is used. It is also more bulky and expensive than the overhead projector. It does, however, enable you to project ready-made materials.

Static Graphics

Static graphics tend to give a "warmed over" impression and for that reason are not as effective as the active graphics. If they are used, *three things should be kept in mind.*

- Keep them *simple*—show only one idea at a time to avoid confusing the viewer.
- *Illustrate* them—so that the subject matter will be remembered.
- Make them *colorful*—so that they attract attention.

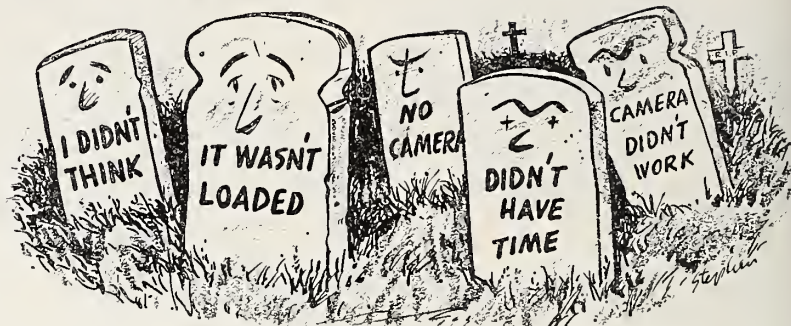
It's Up To You

Certainly you are not going to use *all* forms of visualization in your next presentation! Some of them are more suited to the occasion than others, and your likes and dislikes will influence your choice. If you are concerned with the *effect* of your message rather than just the *exposure*, I think you will admit that some form of visualization is necessary. You can hardly afford to spend your time talking to a group if "half of it goes in one ear and out the other."

Your time is a small factor. Stop and figure up the cumulative time being offered by your audience at your next presentation! It may be frightening because it is not uncommon for the figure to add up to dollars per minute! Unless you take advantage of each minute to use every means to accomplish your purpose, you and the audience both will come out on the short end.

While you are aware of your obligation in terms of time, you might also think back to some of the speeches you, yourself, have sat through. Then the Golden Rule will seem appropriate—"Do unto others as you would have them do unto you."

Don't KILL Your Picture Opportunities



by **GEORGE F. JOHNSON** and **MICHAEL R. LYNCH**,
Visual Aids Specialists, Pennsylvania

MANY extension workers take pictures almost every day to help visualize their stories. More and more each year they use the camera as a serious educational tool. We estimate that in Pennsylvania alone, more than 5,000 black and white negatives and over 10,000 color slides were made last year by county and State extension personnel for press or visual aids. No doubt, similar activity took place in most of the States.

Yet in spite of all this, thousands of other picture opportunities were lost. This was the result of not thinking, not having a camera handy, not having it properly equipped and in good working order, or not taking the little extra time needed to do the camera work. Surely, no one any longer needs convincing that pictures help tell a more interesting and more effective story.

What makes good story-telling pictures? How do they evolve? Where do the ideas come from?

Good story-telling pictures don't just happen. They are planned. Some pictures convey a message; others do not. Often camera work as a forethought rather than as an afterthought makes the difference. Ability to visualize the picture in advance is a prerequisite to good photography. Angle and arrangement are import-

ant. The photographer needs to see the picture before it is taken, the way he wants the newspaper reader or audience in the lecture hall to see it later.

The test of a good storytelling photograph is its ability to "talk" to people in a way that they like, understand, and respond to. It must be likable, not in any way distasteful, and easily understood. The quicker the understanding, the greater the value. Also good pictures are convincing. They prompt desired reaction. One such picture, or a sequence of them, becomes a real aid in visual communications.

Effective picture possibilities especially for the newspapers and farm papers include:

1. Closeups of perhaps 2 to 5 persons at an extension meeting, newly elected officers, award winners, or 4-H Club leaders of long service. Recently we saw in print a very effective pic-

ture of a county agent congratulating one of his 4-H Club leaders for 40 years of service. This picture story could be repeated in many counties throughout the United States.

2. Pictures that relate to acute farm problems and show the human reaction to them. One such could relate to disease damage or control measures.

3. Pictures of new things—new crops, new buildings and equipment, new methods for doing things about the farm and home.

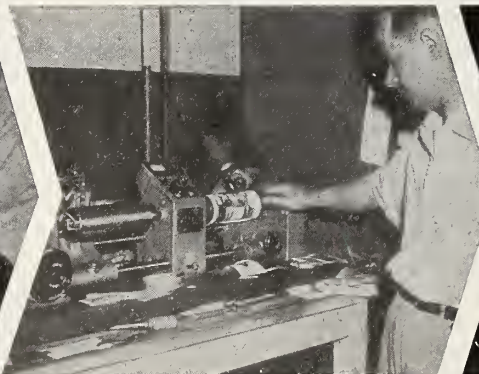
4. Before and after pictures and those of the old and new.

5. Pictures that symbolize progress: These can be closeups of high-quality products, such as apples being picked or potatoes being harvested. For more impact, have a person placed appropriately in each picture to suggest action.

Two rules pay off in press pictures:
(1) Strive for pleasing facial expres-



Cameras in the hands of more Extension workers plus . . .



Local engraving equipment in newspaper plants should mean . . .



MORE and BETTER communications of extension information through **PICTURES.**

sions in pictures of persons; and (2) Keep "open field" pictures simple with compact center of interest. Size and impact of detail are sacrificed in pictures that take in large areas.

These classes of pictures make a hit with newspaper editors: (1) Clear-cut, closeup "action" views with interesting details limited largely to foreground; (2) Human interest shots of persons who can be identified; (3) Timely pictures of important activities for immediate use; (4) Correct size pictures to fit the engraving equipment without alteration.

Pictures likely to be turned down by newspaper editors: (1) Views of loosely grouped, unidentifiable persons; (2) Distant scenes with fuzzy details; (3) Pictures that have lost their timeliness; and (4) Pictures that record lifeless matter with no human appeal.

Television is a growing outlet for good pictures. Pictures that go best on television have the following characteristics: (1) Pictures that can be carried in the dimension of 4 long to 3 high; (2) Pictures printed on a dull-finish paper (glossy prints give reflection problem); (3) Pictures with important details well centered in the message area. Watch out for pictures of persons with heads near top of print or near edges or corners; (4) Pictures that are timely and related to topic under discussion; and (5) How-to-do-it pictures of timely processes which can not be shown "live."

Multiple use of pictures must also be considered. Well-photographed pictures often have several uses. For example, they can be used in the newspaper and later in an exhibit or on television. So file the negatives for additional prints or enlargements if needed. A good file helps later on in building up picture sequences on the old and the new or the before and the after.

Here's a bit of advice from one of the best picture journalists of our day: "If picture-story enthusiasts would spend more time looking at and thinking about the pictures they see in good newspapers and magazines, they'd be much more successful in trying to produce their own picture stories."

Remember, it's not what's in a photographer's hands that counts nearly so much as what's in his head!

To Measure the Success of an Exhibit Use the Results Yardstick—ACTION

by **LEONARD C. RENNIE**, *President, Design and Production, Inc.*

An exhibit should be a message—communication. All too often it is a structure, an assemblage of wood, paint, lights, pictures, models tied together by a layout. The layout is usually dignified by the word "design." The end result can end up as a monument to the builder. It should be the carrier of a message.

After a quarter of a century devoted to exhibits intended to tell a governmental or institutional story I have come to a couple of conclusions that are backed by observation of audiences and analysis of results. These may be stated thus:

A well-worked-out story on a rough structure is better communication than a vague story backed by the finest mechanical workmanship.

Good design (organization and visualization of the message) poorly executed is better than bad design beautifully executed.

Of course, the ideal is a well worked out story told through good design backed by fine workmanship.

The test of any exhibit is "how many people received the message?" not "how many people crowded into the exhibit?" Every reader of this magazine can think of devices for pulling a crowd. The problem is to communicate to the crowd those facts and ideas you want to convey. The ultimate yardstick is *action*. Did they do what you wanted them to do? Did they learn what you wanted them to learn?

How does one arrive at a well worked out story?

Here is one way to tackle it. Write yourself a memorandum (with copies for the 'client,' the designer and the caption writer) in which you state as clearly as possible, and in simple phrases which can be lifted for headlines and captions, the purpose and message of the exhibit and the available supporting material. It might go like this:

A. *The exhibit in the Hometown Fair* (date to) will occupy a space 15 feet wide by 10 feet deep. It will be on a corner. The left-hand end, facing into the exhibit, will be open. Space number is 163 in Building B. (Here you go into details about height allowances, lighting conditions, and all matters pertaining to transportation, installation, etc.)

B. *The purpose of this exhibit* is to tell 50,000 dairy farmers that the Nutritional Value of Barn-cured Hay can be increased 30%, and the Net Feeding Cost Cut 42%, through the use of Irradiated Honey in the Air Filter. The only additional equipment needed is a Radio-Active Queen Bee and a Lead-Shielded Honey Extractor.

C. *Available supporting data.* Farmer Joe Tonkin installed an irradiated honey hay drier in his 60-cow dairy barn and upped the butterfat content 30.76% within eighteen days. (Photo of barn, photo of cows in barn, photo of Mr. Tonkin.) Equipment is simple, consisting of standard blowers and ducts and the honey-treated filter. (Models, drawings or photos with captions.)

(More of same as above).

D. *Sources of Information:* Your County Agent can help you work out an installation for your dairy farm.

E. *Desired Action:* Take your copy of the new book "The Irradiated Honey Process on Dairy Farms," and see your County Agent. Literature supply—500 copies of 4-page Circular and 100 copies of 16-page Farmer's Bulletin. Also 1000 mimeographed requests for literature.

Observe that the foregoing does not mention any display panels, or any mechanics. They come later.

But from that brief memo we can extract the makings of the headlines, the basis of the 'art' (photos, models, plans, etc.) the 'action' line, and we know that we must provide space for stacks of pamphlets, for filling in a blank, and for storing for easy access, but out of sight, cartons of literature.

The material in the foregoing imaginary memo breaks down into four major parts.

Paragraph A contains general information, needed by everybody involved in the exhibit. It should be all there, in one spot.

Paragraph B not only presents the line to which the writer and designer must hew, but it contains the "attention value" of the exhibit. You are trying to reach 50,000 dairy farmers, so you play up increased results at lowered costs.

Paragraph C gets down to substantiating the claims in B, and ties the facts to a local example, a man known in the community. This overcomes the old objections "It won't work here," or "their conditions are different," or "It's all right in the big farms but it's not for us little fellows." Actual models, cutaways, schematic drawings help clarify the techniques.

Paragraph E is the action getter. No exhibit can be an end in itself. Further action is desired. Here we suggest the action the visitor must take. He must ask for, take home and read literature containing more details. Or better still he should ask the County Agent to see him to discuss the question.

The next step is to pull out the key statements for headlines, determine the number and size of photos and other items to be displayed, and to make a layout.

Since no one wants to dig for facts, your layout must be an orderly presentation of your message. Do not force words and art into a preconceived pattern of shapes. Make your layout express the order and importance of the components of the message. This is the hardest part of the job. I don't know anyone who will disagree with the theory of this, but I see few exhibits in which it is carried out.

Preconceived notions of layout so often take over and subvert the message for the sake of "balance" or "a nice arrangement" or "an exciting

use of free forms." For instance, think of the number of exhibits that are laid out to start in the middle and read in two directions at once. The design 'balances' but the facts run off to right and left.

The average mind has a tough enough job absorbing new facts, accepting new ideas, when they are presented in orderly fashion, with a beginning, an exposition and a con-

clusion. See that the layout recognizes this and simplifies as much as possible the job of receiving the ideas the exhibit is intended to communicate.

Once you observe these basic steps you are well on the way toward presenting a successful exhibit. But never forget—the ultimate measure of success is action. Did your exhibit accomplish its purpose?

A Practical File for Your Slides

by ELDON MADISON, Extension Visual Aids Specialist, Nebraska

A slide file that could be constructed by anyone handy with tools is being used in the visual aids office at the University of Nebraska. This file is handy, convenient, and flexible. The size could be varied to meet the needs of any extension worker. The one we use is 29 inches high, 29 inches wide, and 16¾ inches deep. It will hold 700 slides in 10 trays. It is made from 1-inch pine throughout.

The most convenient aspect of the file is the possibility of looking at 70 slides at one time. There is a fluorescent light under frosted glass in the top. When the lid is opened the light goes on automatically. Any tray of slides is then placed over the light. This allows us to select the slides wanted without projecting them or looking at them one by one in a hand viewer. In some cases where there is a question on slides that are similar we do project them to make the final selection.

Trays in the file are divided with T-shaped pieces to make room for 7 slides in each of 10 rows. The dividers are nailed into the frame of 1-inch pine. Two handles are put on each tray for convenience in handling.

The light box is painted white inside for better light distribution. There is a divider running from front to back in the middle to support the two pieces of frosted glass (ground glass). (The glass should be available from a photographic supplier or



A slide file you can make yourself.

a place selling glass.) Under the glass is a 15-watt white fluorescent tube. Somewhat better lighting would be obtained by using two tubes. The light is controlled by a simple push type on-off switch. When the lid is closed a block depresses the switch and turns off the light. The lid is hinged approximately 2 inches from the back.

Between each two trays is a dividing frame. These add rigidity to the whole file and make it easy to remove any tray. It would be possible to make the tray separators thinner or to eliminate some of them to give space for more trays in the same size file.

If desired, one could make a drawer in the bottom for storage. The drawer could be used for keeping slide-binding materials, extra projector lamps, or other supplies.

(Continued on page 46)

"HOW TO DO" *Tips*

by GERTRUDE L. POWER,
Federal Extension Service



Chalk Talks

An inexpensive newsprint pad can serve you very well as a background for casual visuals. If you're one of those fortunate people who can letter and draw as you talk, by all means do so. It will give your presentation action. However, if you haven't mastered the trick of drawing while talking, or if your speaking time is short, you may want to have your artwork already prepared, and perhaps add action by underlining a word or two.

Crayons are all right as drawing tools if your audience is small. But with crayons, it is not easy to get bold strokes that are easily seen from across a large room.

For bolder strokes you may want to try one of the marking pens (fountain-type pens with felt nibs), or pastels (colored chalk).

Pastels can be quite useful. When lettering, you can work the end of a pastel stick to a flat slant, and use that to make your strokes. If you're drawing, you can easily put in tones by breaking about an inch off a stick and using it sideways, not bearing down too hard. This tone, if rather uneven, may be smoothed with your fingers. A "kneaded" eraser or art

gum will help you correct mistakes.

Pastels are not perfect, of course. Sometimes they crumble; sometimes you hit a hard spot that won't make a mark until you bear down hard enough to break it off. Like charcoal, they also smudge easily unless "fixed." But it's easy to fix them in these modern times with plastic spray that may be applied from the top of the can.

On the whole, pastels are flexible and useful tools. Why not try them? They come in soft and half-hard sets of assorted colors, and are reasonably priced.



On Spacing Lettering

Because the spaces between letters are important to the appearance and legibility of lettering, some people painstakingly measure off a set distance between letters before they start, either to hand-letter or to mount readymade letters. Such effort is largely wasted, for the space between letters should vary with the shapes of letters that are next to each other.

For instance, less distance is needed between A and B than between H and I. That is because A is narrow at its top. Less space is also needed between O and P than between M and N because O is curved. In other words, it is not the *distance* between that should be approximately uniform, but the *space area*.

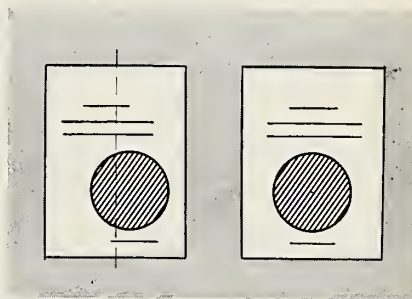
*Do Your
Circular Letters
Have Eye Appeal?*



If you illustrate your letters, you're probably getting more people to read them than if you don't. If you run them on colored paper or in colored ink, they'll be more eye-catching than black on white letters would be. But make sure your colored ink is dark enough and your colored paper light enough to make reading easy.

Also, do you vary the positions of your illustrations, under the Cooperative Extension heading or do all of them usually end up in the upper left? Try a drawing at the top right, try some spilling down the left side, try one at the bottom left or right, or all the way across the top or bottom.

And always keep a lookout for good drawings in magazines and newspapers that can be adapted to make your letters not only look interesting, but to make the points in them more forceful.



Balance in Posters and Charts

The easiest way to get balance in a poster or chart is, of course, to center one item under another. By doing so you end up with balance that is practically perfect and also quite static.

(Continued on next page)

(Continued from page 45)

More interesting balance will result if some items (words and pictures) are placed toward the left on the background cardboard, and others to the right. Both left-hand and right-hand items may cross the center of the board, but not in such a way as to be cut in two.

When you've made such an arrangement, test it by imagining a line down the center. Approximately the same "weight" of words and pictures should be on either side of this imaginary line.

For other tips on posters and charts, see USDA Miscellaneous Publication No. 796 "Making Posters, Flashcards and Charts for Extension Teaching."

A File for Your Slides

(Continued from page 44)

This convenient way of filing slides is not original with the author. The first file of this kind was seen in the office of Corwin Mead, Hamilton County, Nebr., extension agent. Mr. Mead's file is considerably larger than this one. However, we feel that this is a good size for the person who has a limited number of slides. We are sure that if a file of this kind is in your office you will use your slides to much better advantage. More important is the elimination of much of the frustration in selecting slides for any presentation.

Our way of using the file is somewhat as follows. When slides are returned from the processor they are projected. Any that are of poor quality are discarded. They are then separated according to subject and placed in the file. All slides on the same subject are placed in the same tray. Trays are then labeled. When slides of any particular subject are required we pull out that tray and place it over the light. Those that fit the subject and tell the story we want to tell are selected. They are then arranged in a logical sequence. In all cases we try to keep the total number under 25. Remember that if your audience loses interest or goes to sleep, your educational opportunity is lost.



Muscling in on Pinocchio

This little wooden man with a spring in his block-type back helps to demonstrate proper lifting posture. He is one of many visual aids used by Verda Dale, home management specialist in Massachusetts, in a 4-meeting course on work simplification.

Supermarket Visuals

(Continued from page 33)

watermelon. Did she print them on a chart? Did she write them on a board? Did she project them on a slide? She carved the five points on five watermelons.

Need snow flakes for your TV show? You can buy a whole storm for thirty-odd cents—soap flakes, of course.

Empty sixteen millimeter motion picture film cans make excellent silver dollars to pile up in making a budget report.

You can show up for a meeting on farm and home safety with all your fingers bandaged, or you can start a program on personal weight control by carrying an old spare tire with you to the platform.

Easy to get, everyday materials, used with imagination, dramatize the stories we have to tell. At the same time, the real object in a story is its own best visual. Many times an abstract subject, or the difficulties of space and size, make the use of real objects impractical. However, a piece of real sod as a visual for a presentation on grass, real plants for a discussion of varieties, real examples of insect damage, all help our audience understand better what we have to say.

All this is not to say that modern

mechanical equipment for visual education is not desirable. It is, indeed. But unfortunately, we do not all have the newest type slide projector, magnetic boards, overhead viewgraphs, and other desirable equipment. The point here is that the lack of them in no way stops your visual presentations. Whether you get them in a photographic shop or a supermarket, it's your own attitude toward visual education that counts most. See?

Portent in the Sky

(Continued from page 30)

The new era of visual communication means a broader view of the function of visuals, a view which looks beyond mere gadgets to relate them to the known facts of human behavior. Instead of dealing separately and in isolation with the elements outlined in Figure 1, we shall consider the whole process of conveying the message through each stage, by treating our message in a way that is appropriate for the specific audience, choosing the channels of communication that can make connections with the "inner circles," to carry the recipients from the stage of awareness to final decision and action without extraneous diversions. This approach cannot be judged by a mere statistical measure of number of persons reached; it must be judged rather by the results—in decisions, actions, and attitudes—for those who are reached.



4-H Club Exhibits

Exhibits that tell a story have been featured for several years during National 4-H Club Week by the Massachusetts 4-H Clubs. In 1956, each county averaged 20 such exhibits which were placed in store windows, public buildings, and in stores. A standard scorecard is used throughout the State, and modest awards are given to outstanding exhibits in some localities. Many shown in March are also used at youth night programs presented locally by 4-H Club groups.

Plan an Exhibit.....

....Who, Me?



by DUANE NELSON, Visual Aids Specialist, Michigan

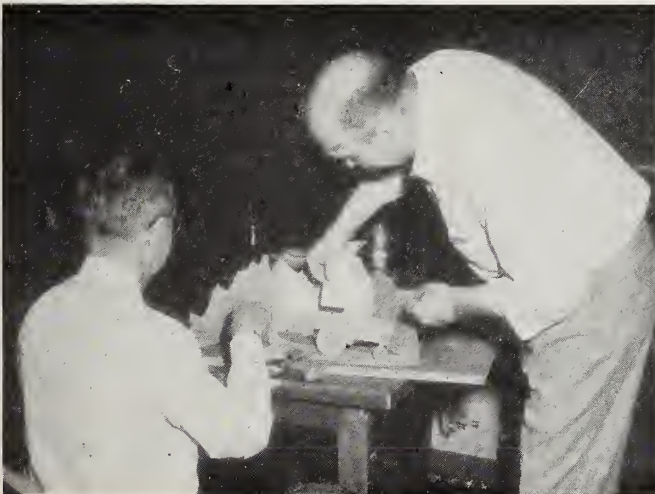
SOONER or later you'll find yourself planning an exhibit, whether you are a specialist, a county extension agent, or a local leader.

As a specialist you may be wanting a small exhibit to carry to meetings, to set up in a store window, or one to lend for county events. If you are a county extension worker, you may feel you have neglected the exhibit, an important medium in mass communications. You may want to plan an exhibit of county activities for the fair or other events. As a local leader you will be planning an exhibit for achievement days, home demonstration week, or other local events.

Now, exhibit planning and constructing can be fun, or it can be a headache.

An exhibit can be tricky. It is easy to get bogged down in a maze of cut-outs, color schemes, and models. When this happens, the means become so intricate that the end disappears from view and the exhibit is no longer fun.

Two agents build a scale model of a safety exhibit to be used in a store window during National 4-H Club Week. Notice that they are using a good background to point up the exhibit.



Where To Begin

To avoid the pitfalls in exhibit planning, begin with the questions: Why? What? Who? and Where? Forget the "How?" until a plan has been developed.

There are many reasons why you might want to exhibit. An exhibit is an attention getter; it reaches people who do not read circulars, listen to broadcasts, or show up at extension meetings; it has a dramatic impact; it is a timesaver, in that if the exhibit is well planned, the person viewing the exhibit can learn in a few seconds some recommended practice or method; and it can be a demonstration. When planning your exhibit, keep this in mind—your exhibit should be a supplement to your program or to a particular project.

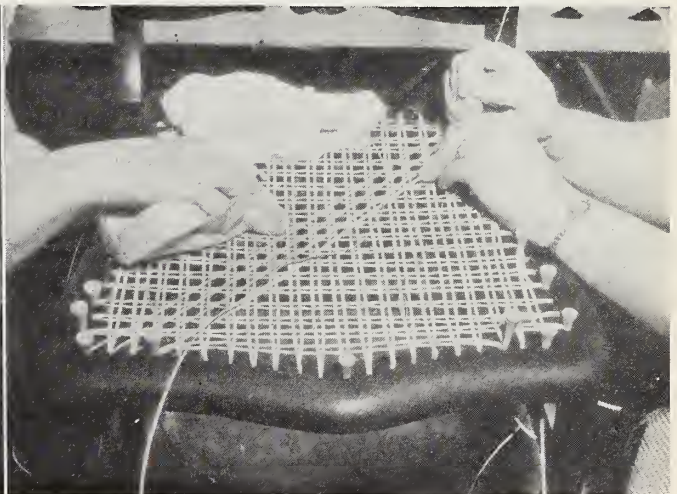
A participation exhibit is effective because if you give folks a chance to push buttons, open boxes, or pull levers in your exhibit, they learn more readily and remember longer.

The next important question to answer is what are you going to exhibit—keeping in mind your audience or the who. Consider their wants, likes, and needs. The people you wish to reach will determine what you will be exhibiting. An exhibit designed for a mixed audience would be entirely different from one designed for women. The where you exhibit is important, too, in planning the what of the exhibit. You may be exhibiting in a tent, a school building, a store window or a fair ground building. So select the project that would fit into the where situation. Remember that you will have stiff competition at the county fairs or at other events. At the county fair, for instance, you are competing with commercial exhibits, the ferris wheel, the midway, and the livestock show.

Exhibits are expensive and time-consuming. So weigh the pros and cons before you decide on making an exhibit. Consider your subject mat-

(Continued on next page)

As a part of a continuous demonstrational exhibit, these two leaders are showing how to cane a chair. This is one of the most effective exhibit techniques. Different leaders take part during the day.



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(Continued from page 47)

ter, the amount of money you have available for an exhibit, and whether or not you can get help.

If what you want to say can be expressed fully and dramatically with a few simple words; if the spot for the exhibit is where you will reach the people you want to reach; if you have plenty of assistance and if your budget will permit you to spend money, then make plans for an exhibit.

Select Your Message

Plan your exhibit with the conviction that an exhibit is what you need to help put across a particular phase of your program. After you have selected your message, begin with the "how" of expressing it; weigh your resources.

What demonstration materials, models, photographers, lights do you have available or that you can borrow? Who can help with carpentry, art work, lettering, and photography if needed? After you have your props in mind you are ready to build the model of your exhibit, if that is necessary.

Keep It Simple

Most exhibits suffer from the overdose of "toos"—too many figures, too many facts, too many colors, too much copy, too many models, or, in other words—too many elements.

An exhibit must be an "attention getter." Use a gimmick as you would your voice if you were trying to stop a passer-by. For example, Mr. Jones is walking by your office or driving

by your farm. You want to gain his attention to remind him of an important meeting, and you shout "Hey, Mr. Jones!" Don't forget extension council meeting 8:00 p.m." Notice what you did to get his attention. You raised your voice. You spoke directly to him. You told him what you wanted him to do. You told him about something that was important to him. And you told him quickly. Handle your exhibit with its message the same way.

Narrow down your choice of theme and your presentation. In that way you will put your message in a few simple words. Then direct the message to your audience. You raise your voice in an exhibit by building on a clear-cut simple plan using a bright color, strong lines, and the fewest possible number of elements.



A group of leaders who were studying how to construct educational exhibits used the "Hey, Mrs. Jones!" to attract attention to this exhibit on how to etch an aluminum tray.



This exhibit won the blue ribbon at the county fair. The background, made from a mattress box helps to provide a feeling of unity.